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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/689,927	10/21/2003	Hideyuki Kanehara	244227US0	4872
22850	7590	05/26/2005	EXAMINER	
OBLON, SPIVAK, MCCLELLAND, MAIER & NEUSTADT, P.C. 1940 DUKE STREET ALEXANDRIA, VA 22314			THERKORN, ERNEST G	
			ART UNIT	PAPER NUMBER

1723

DATE MAILED: 05/26/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	10/689,927	KANEHARA ET AL.	
	<b>Examiner</b>	<b>Art Unit</b>	
	Ernest G. Therkorn	1723	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 28 April 2005.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1,3,6 and 8-18 is/are pending in the application.
- 4a) Of the above claim(s) 11-18 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☐ Claim(s) 1,3,6 and 8-10 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

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Newly submitted claim 18 directed to an invention that is independent or distinct from the invention originally claimed for the following reasons:

Restriction to one of the following inventions is required under 35 U.S.C. 121:

- I. Claims 1, 3, 6, and 8-17, drawn to a kit and a carrier, classified in class 210, subclass 198.2.
- II. Claim 18, drawn to a method of separating, classified in class 210, subclass 635.

The inventions are distinct, each from the other because:

Inventions I and II are related as product and process of use. The inventions can be shown to be distinct if either or both of the following can be shown: (1) the process for using the product as claimed can be practiced with another materially different product or (2) the product as claimed can be used in a materially different process of using that product (MPEP § 806.05(h)). In the instant case, the product as claimed could be used in a materially different process of using that product. For example, the product could be used as a catalyst or biocatalyst in a chemical or biochemical reaction process.

Because these inventions are distinct for the reasons given above and have acquired a separate status in the art as shown by their different classification, restriction for examination purposes as indicated is proper.

Since applicant has received an action on the merits for the originally presented invention, this invention has been constructively elected by original presentation for

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prosecution on the merits. Accordingly, claim 18 is withdrawn from consideration as being directed to a non-elected invention. See 37 CFR 1.142(b) and MPEP § 821.03.

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1, 3, 6, and 8-10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Abbott (U.S. Patent No. 6,277,489) in view of either Boos (U.S. Patent No. 6,074,555) or Zhang (U.S. Patent No. 6,814,870). At best, the claims differ from Abbott (U.S. Patent No. 6,277,489) in reciting use of a fatty acid. Abbott (U.S. Patent No. 6,277,489) itself discloses on column 9, line 30 and column 16, line 63 carboxylic acid as a recognition moiety and on column 23, lines 55-60 discloses fatty acids. Boos (U.S. Patent No. 6,074,555) (column 3, lines 18-22 and 51-60; column 4, lines 8-11, lines 31-35, and 61-64) discloses that stearic acid (which is both a fatty acid and a carboxylic acid) is a preferred reversed phase ligand. Zhang (U.S. Patent No. 6,814,870) (column 14, lines 16-21 and column 24, lines 29-31) discloses that ligands are involved in molecular recognition and that fatty acids are ligands. It would have been obvious to use a fatty acid in Abbott (U.S. Patent No. 6,277,489) because Abbott (U.S. Patent No. 6,277,489) itself discloses on column 9, line 30 and column 16, line 63

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carboxylic acid as a recognition moiety and on column 23, lines 55-60 discloses fatty acids and either because Boos (U.S. Patent No. 6,074,555) (column 3, lines 18-22 and 51-60; column 4, lines 8-11, lines 31-35, and 61-64) discloses that stearic acid (which is both a fatty acid and a carboxylic acid) is a preferred reversed phase ligand or because Zhang (U.S. Patent No. 6,814,870) (column 14, lines 16-21 and column 24, lines 29-31) discloses that ligands are involved in molecular recognition and that fatty acids are ligands.

Claim 9 is rejected under 35 U.S.C. 103(a) as being unpatentable over Abbott (U.S. Patent No. 6,277,489) in view of either Boos (U.S. Patent No. 6,074,555) or Zhang (U.S. Patent No. 6,814,870) as applied to claims 1, 3, 6, and 8-10 above, and further in view of Frechet (U.S. Patent No. 5,431,807). At best, the claim differs from Abbott (U.S. Patent No. 6,277,489) in view of either Boos (U.S. Patent No. 6,074,555) or Zhang (U.S. Patent No. 6,814,870) in reciting use of two different carboxylic acids. Frechet (U.S. Patent No. 5,431,807) (column 4, line 61-column 5, line 16) discloses that use of two different surface groups allows for consecutive operations in a single column. It would have been obvious to use two different carboxylic acids in Abbott (U.S. Patent No. 6,277,489) in view of either Boos (U.S. Patent No. 6,074,555) or Zhang (U.S. Patent No. 6,814,870) because Frechet (U.S. Patent No. 5,431,807) (column 4, line 61-column 5, line 16) discloses that use of two different surface groups allows for consecutive operations in a single column.

Claims 1, 3, 6, and 8-10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Abbott (U.S. Patent No. 6,277,489) in view of either Boos (U.S.

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Patent No. 6,074,555) or Zhang (U.S. Patent No. 6,814,870) and either Matsushita (U.S. Patent No. 4,341,634) or Barkatt (U.S. Patent No. 4,648,975). At best, the claims differ from Abbott (U.S. Patent No. 6,277,489) in reciting use of a fatty acid. Abbott (U.S. Patent No. 6,277,489) itself discloses on column 9, line 30 and column 16, line 63 carboxylic acid as a recognition moiety and on column 23, lines 55-60 discloses fatty acids. Boos (U.S. Patent No. 6,074,555) (column 3, lines 18-22 and 51-60; column 4, lines 8-11, lines 31-35, and 61-64) discloses that stearic acid (which is both a fatty acid and a carboxylic acid) is a preferred reversed phase ligand. Zhang (U.S. Patent No. 6,814,870) (column 14, lines 16-21 and column 24, lines 29-31) discloses that ligands are involved in molecular recognition and that fatty acids are ligands. Barkatt (U.S. Patent No. 4,648,975) (column 6, lines 45-56 and column 9, lines 53-59) discloses that use of an oxide of metals reduces the dissolution of a carrier. Matsushita (U.S. Patent No. 4,341,634) (column 2, lines 51-65) discloses that use of silver oxide is one method of obtaining a silver treated carrier. It would have been obvious to use a fatty acid in Abbott (U.S. Patent No. 6,277,489) because Abbott (U.S. Patent No. 6,277,489) itself discloses on column 9, line 30 and column 16, line 63 carboxylic acid as a recognition moiety and on column 23, lines 55-60 discloses fatty acids and either because Boos (U.S. Patent No. 6,074,555) (column 3, lines 18-22 and 51-60; column 4, lines 8-11, lines 31-35, and 61-64) discloses that stearic acid (which is both a fatty acid and a carboxylic acid) is a preferred reversed phase ligand or because Zhang (U.S. Patent No. 6,814,870) (column 14, lines 16-21 and column 24, lines 29-31) discloses that ligands are involved in molecular recognition and that fatty acids are ligands. It would

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have been obvious to use silver oxide in Abbott (U.S. Patent No. 6,277,489) in view of either Boos (U.S. Patent No. 6,074,555) or Zhang (U.S. Patent No. 6,814,870) and either because Barkatt (U.S. Patent No. 4,648,975) (column 6, lines 45-56 and column 9, lines 53-59) discloses that use of an oxide of metals reduces the dissolution of a carrier or because Matsushita (U.S. Patent No. 4,341,634) (column 2, lines 51-65) discloses that use of silver oxide is one method of obtaining a silver treated carrier.

Claim 9 is rejected under 35 U.S.C. 103(a) as being unpatentable over Abbott (U.S. Patent No. 6,277,489) in view of either Boos (U.S. Patent No. 6,074,555) or Zhang (U.S. Patent No. 6,814,870) and either Matsushita (U.S. Patent No. 4,341,634) or Barkatt (U.S. Patent No. 4,648,975) as applied to claims 1, 3, 6, and 8-10 above, and further in view of Frechet (U.S. Patent No. 5,431,807). At best, the claim differs from Abbott (U.S. Patent No. 6,277,489) in view of either Boos (U.S. Patent No. 6,074,555) or Zhang (U.S. Patent No. 6,814,870) and either Matsushita (U.S. Patent No. 4,341,634) or Barkatt (U.S. Patent No. 4,648,975) in reciting use of two different carboxylic acids. Frechet (U.S. Patent No. 5,431,807) (column 4, line 61-column 5, line 16) discloses that use of two different surface groups allows for consecutive operations in a single column. It would have been obvious to use two different carboxylic acids in Abbott (U.S. Patent No. 6,277,489) in view of either Boos (U.S. Patent No. 6,074,555) or Zhang (U.S. Patent No. 6,814,870) and either Matsushita (U.S. Patent No. 4,341,634) or Barkatt (U.S. Patent No. 4,648,975) because Frechet (U.S. Patent No. 5,431,807) (column 4, line 61-column 5, line 16) discloses that use of two different surface groups allows for consecutive operations in a single column.

The remarks urge patentability based the allegation that the claims exclude Abbott (U.S. Patent No. 6,277,489)'s metal film layer. However, the phrase "consisting essentially of" is not considered to exclude Abbott (U.S. Patent No. 6,277,489)'s metal film layer. In any event, Abbott (U.S. Patent No. 6,277,489)'s metal film layer is disclosed to be silver on column 11, lines 34-44. Barkatt (U.S. Patent No. 4,648,975) (column 6, lines 45-56 and column 9, lines 53-59) discloses that use of an oxide of metals reduces the dissolution of a carrier. Matsushita (U.S. Patent No. 4,341,634) (column 2, lines 51-65) discloses that use of silver oxide is one method of obtaining a silver treated carrier. Accordingly, Abbott (U.S. Patent No. 6,277,489)'s metal film layer as modified by either Barkatt (U.S. Patent No. 4,648,975) or Matsushita (U.S. Patent No. 4,341,634) would result in claim 1's aluminum oxide with silver oxide.

The remarks urge that the claims do not use a metal film. However, the claim 1's and 10's recitation of "aluminum oxide with silver oxide" is considered to be claiming use of a metal film.

**THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of

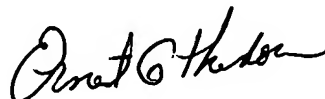


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the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication should be directed to E. Therkorn at telephone number (571) 272-1149. The official fax number is (703) 872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



**Ernest G. Therkorn**  
**Primary Examiner**  
**Art Unit 1723**

EGT  
May 23, 2005